

3-3

Practice

Slopes of Lines

Determine the slope of the line that contains the given points.

1. $B(-4, 4), R(0, 2)$

~~2.~~ $I(-2, -9), P(2, 4)$

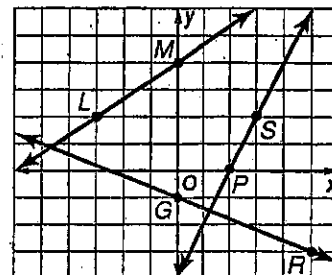
Find the slope of each line.

3. \overline{LM}

~~4.~~ \overline{GR}

5. a line parallel to \overline{GR}

~~6.~~ a line perpendicular to \overline{PS}



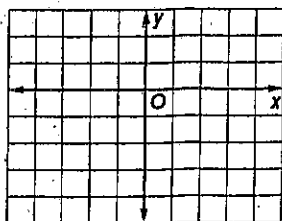
Determine whether \overline{KM} and \overline{ST} are *parallel*, *perpendicular*, or *neither*.

7. $K(-1, -8), M(1, 6), S(-2, -6), T(2, 10)$ ~~8.~~ $K(-5, -2), M(5, 4), S(-3, 6), T(3, -4)$

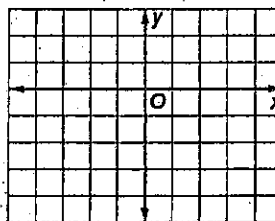
9. $K(-4, 10), M(2, -8), S(1, 2), T(4, -7)$ ~~10.~~ $K(-3, -7), M(3, -3), S(0, 4), T(6, -5)$

Graph the line that satisfies each condition.

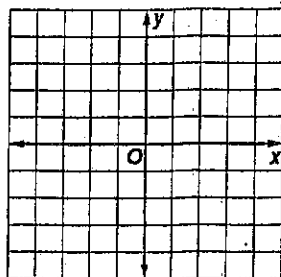
11. slope = $-\frac{1}{2}$, contains $U(2, -2)$



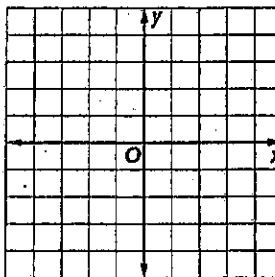
12. slope = $\frac{4}{3}$, contains $P(-3, -3)$



13. contains $B(-4, 2)$, parallel to \overline{FG} with $F(0, -3)$ and $G(4, -2)$



14. contains $Z(-3, 0)$, perpendicular to \overline{EK} with $E(-2, 4)$ and $K(2, -2)$



- ~~16.~~ **PROFITS** After Take Two began renting DVDs at their video store, business soared. Between 2000 and 2003, profits increased at an average rate of \$12,000 per year. Total profits in 2003 were \$46,000. If profits continue to increase at the same rate, what will the total profit be in 2009?

3-4 Practice

Equations of Lines

Write an equation in slope-intercept form of the line having the given slope and y-intercept.

1. $m: \frac{2}{3}$, y-intercept: -10

2. $m: -\frac{7}{9}$, $(0, -\frac{1}{2})$

3. $m: 4.5$, $(0, 0.25)$

Write equations in point-slope form and slope-intercept form of the line having the given slope and containing the given point.

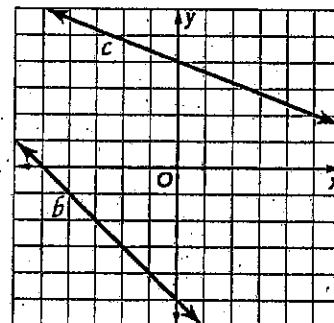
~~4.~~ $m: \frac{3}{2}$, $(4, 6)$

~~5.~~ $m: -\frac{6}{5}$, $(-5, -2)$

~~6.~~ $m: 0.5$, $(7, -3)$

~~7.~~ $m: -1.3$, $(-4, 4)$

Write an equation in slope-intercept form for each line.

8. b 9. c 10. parallel to line b , contains $(3, -2)$ 11. perpendicular to line c , contains $(-2, -4)$ 

Write an equation in slope-intercept form for the line that satisfies the given conditions.

12. $m = -\frac{4}{9}$, y-intercept = 2

13. $m = 3$, contains $(2, -3)$

14. x-intercept is -6 , y-intercept is 2

15. x-intercept is 2, y-intercept is -5

16. passes through $(2, -4)$ and $(5, 8)$

17. contains $(-4, 2)$ and $(8, -1)$

- ~~18.~~ **COMMUNITY EDUCATION** A local community center offers self-defense classes for teens. A \$25 enrollment fee covers supplies and materials and open classes cost \$10 each. Write an equation to represent the total cost of x self-defense classes at the community center.